



# Stormwater FAQs

## USABlueBook



### FREQUENTLY ASKED QUESTIONS...

**Sometimes you gotta lead the horse to (Storm)water...**

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*We give you the calm  
after the storm™*





Ultra-DrainSeal Part# 2130



Ultra-DewateringBag, Reusable Model Part# 9732



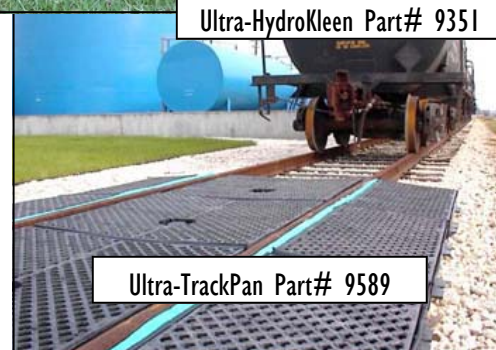
Ultra-HydroKleen Part# 9351



Ultra-SpillBerm Part# 2100



Ultra-HardTop P2 Plus Part# 9612



Ultra-TrackPan Part# 9589



Ultra-StormWattle Part# 9740



Ultra-GutterGuard Part# 9320



Ultra-DewateringBag Part# 9724-0/S



Ultra-GrateLifter Part# 9234



Ultra-CurbGuard Part# 9265



Ultra-DrainGuard, Reusable Model Part# 9341

# Stormwater FAQs

## Stormwater Regulations

- 1. What is stormwater runoff?** Stormwater discharges are generated by runoff from land and impervious areas such as paved streets, parking lots, and building rooftops during rainfall and snow events that often contain pollutants in quantities that could adversely affect water quality. Most stormwater discharges are considered “point sources” and require coverage by an NPDES permit. The primary method to control stormwater discharges is through the use of “best management practices”.
- 2. Why is Stormwater Runoff a problem?** Stormwater can pick up debris, chemicals, dirt, and other pollutants and flow into a storm sewer system or directly to a lake, stream, river, wetland, or coastal water. Anything that enters a storm sewer system is discharged untreated into the waterbodies we use for swimming, fishing and providing drinking water. Polluted stormwater runoff can have many adverse effects on plants, fish, animals and people.

**Sediment** can cloud the water and make it difficult or impossible for aquatic plants to grow. Sediment also can destroy aquatic habitats.

**Excess nutrients** can cause algae blooms. When algae die, they sink to the bottom and decompose in a process that removes oxygen from the water. Fish and other aquatic organisms can't exist in water with low dissolved oxygen levels.

**Bacteria and other pathogens** can wash into swimming areas and create health hazards, often making beach closures necessary.

**Debris** - plastic bags, six-pack rings, bottles, and cigarette butts - washed into waterbodies can choke, suffocate, or disable aquatic life like ducks, fish, turtles, and birds.

**Household hazardous wastes** like insecticides, pesticides, paint, solvents, used motor oil, and other auto fluids can poison aquatic life. Land animals and people can become sick from eating diseased fish and shellfish or ingesting polluted water.

**Polluted stormwater** often affects drinking water sources. This, in turn, can affect human health and increase drinking water treatment costs.

- 3. What is a BMP (Best Management Practice)?** Schedules of activities, prohibitions of practices, maintenance procedures, and other management *practices* to prevent or reduce the discharge of pollutants to waters of the United States. BMPs also include treatment requirements, operating procedures, and practice to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. A “Structural BMP” is a physical device that prevents or reduces the discharge of pollutants. “Non-Structural BMPs” are other “practices” spoken of previously.

### 4. Do we need a Stormwater Permit?

Construction: The NPDES Stormwater program requires operators of construction sites one acre or larger (including smaller sites that are part of a larger common



plan of development) to obtain authorization to discharge storm water under an NPDES construction storm water permit.

Industrial Activities: To limit pollutants in storm water discharges from industrial facilities, the NPDES Phase I Storm Water Program includes an industrial storm water permitting component. Operators of industrial facilities included in one of the 11 categories of "storm water discharges associated with industrial activity" (40 CFR 122.26 (b)(14)(i)-(xi)) that discharge storm water to a municipal separate storm sewer system (MS4) or directly to waters of the United States require authorization under a NPDES industrial storm water permit. If an industrial facility has a Standard Industrial Classification (SIC) code or meets the narrative description listed in the 11 categories, the facility operator must determine if the facility is eligible for coverage under a general or an individual NPDES industrial storm water permit. In some cases, a facility operator may be eligible for a conditional/temporary exclusion from permitting requirements.

The list provided below describes the types of industrial activities within each category.

- Category One (i): Facilities with effluent limitations
- Category Two (ii): Manufacturing
- Category Three (iii): Mineral, Metal, Oil and Gas
- Category Four (iv): Hazardous Waste, Treatment, or Disposal Facilities
- Category Five (v): Landfills
- Category Six (vi): Recycling Facilities
- Category Seven (vii): Steam Electric Plants
- Category Eight (viii): Transportation Facilities
- Category Nine (ix): Treatment Works
- Category Ten (x): Construction Activity \*
- Category Eleven (xi): Light Industrial Activity

Municipalities: In 1990, EPA promulgated rules establishing Phase I of the National Pollutant Discharge Elimination System (NPDES) storm water program. The Phase I program for MS4s requires operators of "medium" and "large" MS4s, that is, those that generally serve populations of 100,000 or greater, to implement a storm water management program as a means to control polluted discharges from these MS4s. The Storm Water Phase II Rule extends coverage of the NPDES storm water program to certain "small" MS4s (10,000 or larger in population) but takes a slightly different approach to how the storm water management program is developed and implemented.

**5. When did these stormwater regulations take effect?** Phase ONE of the regulations came into effect in the early 1990s and affected large cities with populations of 100,000, construction sites of 5 acres and larger, and operators of industrial facilities included in one of the 11 categories of "storm water discharges associated with industrial activity". Phase TWO of the stormwater regulations came into effect on March 10, 2003 and cover smaller cities with populations of 10,000, construction sites of one acre and larger. Industrial facilities should already have permits in place. The new regulations offered exclusions to permitting available in some instances.

**6. What is the Clean Water Act?**

In 1987, Congress established the Nonpoint Source Management Program under section

319 of the Clean Water Act (CWA), to help states address nonpoint source, or runoff pollution by identifying waters affected by such pollution and adopting and implementing management programs to control it. These programs recommend where and how to use best management practices (BMPs) to prevent runoff from becoming polluted, and where it is polluted, to reduce the amount that reaches surface waters.

**7. What is the National Pollutant Discharge Elimination System (NPDES) Storm Water Program?** Polluted storm water runoff is a leading cause of impairment to the nearly 40 percent of surveyed U.S. water bodies which do not meet water quality standards. Over land or via storm sewer systems, polluted runoff is discharged, often untreated, directly into local water bodies. When left uncontrolled, this water pollution can result in the destruction of fish, wildlife, and aquatic life habitats; a loss in aesthetic value; and threats to public health due to contaminated food, drinking water supplies, and recreational waterways.

Mandated by Congress under the Clean Water Act, the NPDES Storm Water Program is a comprehensive two-phased national program for addressing the non-agricultural sources of storm water discharges which adversely affect the quality of our nation's waters. The Program uses the National Pollutant Discharge Elimination System (NPDES) permitting mechanism to require the implementation of controls designed to prevent harmful pollutants from being washed by storm water runoff into local water bodies.

**8. What is nonpoint source pollution?** Nonpoint source (NPS) pollution, unlike pollution from industrial and sewage treatment plants, comes from many diffuse sources. NPS pollution is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters, and even our underground sources of drinking water. These pollutants include:

- Excess fertilizers, herbicides, and insecticides from agricultural lands and residential areas;
- Oil, grease, and toxic chemicals from urban runoff and energy production;
- Sediment from improperly managed construction sites, crop and forest lands, and eroding stream banks;
- Salt from irrigation practices and acid drainage from abandoned mines;
- Bacteria and nutrients from livestock, pet wastes, and faulty septic systems;
- Atmospheric deposition and hydro modification are also sources of nonpoint source pollution.

## Stormwater Products (Structural BMPs)

**9. How does the Ultra-DrainGuard work?** The Ultra-DrainGuard Oil & Sediment Plus Model® part # 9219 is a highly effective "Catch Basin Insert" designed to filter sediment, oil and debris from stormwater runoff. The device is a simple to install, cost effective means of removing pollutants from storm water as it flows into the storm drain. The Ultra-DrainGuard is installed in a catch basin and is suspended in place by the grate itself or with retainer rods. Storm water runoff enters the DrainGuard and is directed toward the pouch by a skirt made of a polypropylene, needle-punched, geotextile material. This fabric filters the pollutants from the water stream as it passes over and flows through the material. Additionally, each Ultra-DrainGuard Oil & Sediment Plus Model® is equipped with a replaceable oil-absorbing pillow that removes oil and grease from water flow as it passes through the DrainGuard. The Ultra-DrainGuard is designed with "Bypass Ports" to prevent flooding from occurring should a large flow of storm water suddenly enter the storm drain

system. The Ultra-DrainGuard may be custom sized to ensure unrestricted water flow into a catch basin in a heavy rain event. A single Ultra-DrainGuard unit can filter out and contain up to forty pounds of oil, sediment, debris and floatables.

**10. What are some of the applications for the DrainGuard?**

- Catch Basins in parking lots, commercial and industrial facilities and in roads and highways.
- Catch Basins at stadiums, parades, fairs, outdoor gatherings for litter and debris collection.
- Catch Basins that clog with leaves during the fall.
- At transportation centers such as truck stops, bus depots, parking lots, drive-thrus, and
- maintenance facilities.
- Washing stations for trucks, cars, and other vehicles.
- Golf courses and ball fields for grass clipping collection.

**11. How often should the Ultra-DrainGuard be changed out?** Catch Basin Inserts act as a filtering device and have shown to be functioning well after a year in the field. We recommend that the *first time* a DrainGuard is installed it should be inspected after the first series of rain events. The initial inspection will determine the typical amount of sediment and floating material flowing into the individual storm drain and captured by the DrainGuard. The amount of pollutants flowing into a storm drain will vary based on the unique characteristics of the surrounding terrain. Differences in soils, traffic, road slope and distance between storm drains can cause varying amounts of sediment and pollutants to be carried by the storm water into the storm drain. By observing the unique nature of each DrainGuard installation, a “change out schedule” can soon be determined. On average, a DrainGuard will function effectively from six months to one year. Independent field tests have shown up to 80% reduction in sediment loadings as well as a 75% reduction of free-oil.

**12. How do you know when to change out the Ultra-DrainGuard?** The Ultra-DrainGuard Oil & Sediment Plus® part # 9219 device should be replaced in the following instances:

- For predominately sediment or trash and debris applications, conduct a visual inspection. If the amount of sediment and debris captured in the pouch has risen to a level one inch below the bypass ports, a change-out of the product is recommended.
- For predominately hydrocarbon removal applications, conduct an inspection of the filter fabric the unit is made of or the X-Tex filter strips. If either of these filter materials has become saturated with hydrocarbons, a change-out of the product is recommended. To determine if saturation has occurred, use a grate hook to lift one of the straps located on the top of the Ultra-DrainGuard up through the grate so that the Ultra-DrainGuard is pinned to the bottom of the grate. This allows the user to reach into the grate openings to feel the base fabric for saturation of hydrocarbons and also pull up and test the filters strips located inside the opening of the Ultra-DrainGuard’s pouch.

**13. What happens if you forget to change out the DrainGuard and it fills up with sediment ... will it flood the streets?** The DrainGuard has “bypass ports” that will allow the

excess water to flow past the filter material if heavy rain events create heavy runoff and will not impede the flow through the catch basin if sized correctly. The standard bypass port design allows 770 gpm to flow through the ports.

**14. How much oil and sediment will the DrainGuard capture?** Independent field tests have shown up to 80% reduction in sediment loadings (40 lbs.) as well as a 75% reduction of free-oil.

**15. What is the flow rate capacity of the DrainGuard?** A fully occluded DrainGuard will allow 770 gpm of storm water flow through its Bypass Ports. DrainGuards with larger flow rates may be manufactured when needed. Typical treatment capacity is 500 gpm.

**16. Do Ultra-DrainGuards work in the winter and in freezing conditions?** In many cases the Ultra-DrainGuards will continue to operate effectively until outdoor temperatures reach zero degrees Fahrenheit. Typically, Ultra-DrainGuards will not freeze up in the air temperature of a 0° - 32° F range based on the following factors:

- The Ultra-DrainGuards are below ground and warmer air tends to circulate through the stormwater pipes keeping the temperature elevated in the catch basins and the Ultra-DrainGuards less likely to freeze-up.
- In locations where snow and freezing temperatures often occur, salt is used on the roads to prevent freezing of surface water. Much of this salt flows into the Ultra-DrainGuards and is mixed with the sediment filling the Ultra-DrainGuard. The salt helps prevent the sediment and Ultra-DrainGuard from freezing up in temperatures above 0° F.

**17. What happens to the Ultra-DrainGuards when the outdoor temperature falls below 0° F?** This temperature has no detrimental effect on the Ultra-DrainGuard itself, however extended temperatures of 0° F will cause the sediment and the moisture in the Ultra-DrainGuard to freeze up. This does not present a functional problem since any other water or snow on the streets will be frozen as well so there is no need for the Ultra-DrainGuard to be functional at that time. As the weather warms and stormwater begins to flow once again, the Ultra-DrainGuard tends to thaw in a similar timeframe, allowing it to function again.

**18. Is there ever a cold weather situation where the Ultra-DrainGuard may not be effective?** We are aware of only one limited circumstance. It has been 0° F and the streets and Ultra-DrainGuards are frozen solid. Then a very quick warm front moves through (i.e. 60° F air temperature) and there is heavy rain. This warm rain will immediately flow into the catch basins and into the frozen Ultra-DrainGuards. Until the Ultra-DrainGuards are thawed due to the warmer water, the water will not be filtered by the Ultra-DrainGuard, it will simply flow out through the by-pass ports located at the top of the Ultra-DrainGuard. No ponding or flooding would occur and the Ultra-DrainGuard would begin functioning again once it thaws. This circumstance does not occur often and is more likely in more southern states like Oklahoma and Texas.

**19. How do you install a DrainGuard?** Grates can be easily removed by utilizing the Ultra-GrateLifter® part # 9234, a new product that allows a single person to lift the grate with this professional quality lever device. The Ultra-GrateLifter can lift up to a 400 pound

grate. When the grate has been removed the DrainGuard should be placed over the open hole and can be held in place by utilizing “Retainer Bars” through the 4 loops on the surface of the skirt or by simply placing heavy objects on the skirt to hold it in place while the grate is moved back into position. The large flat support base of the Ultra-GrateLifter® remains stationary when the grate is removed so that the grate goes right back into place when it is returned to the catch basin. When the DrainGuard is positioned back in place, the excess material can easily be trimmed with a pair of scissors. Be sure to leave a couple of inches of fabric around the edges to allow for any slippage. This visible fabric allows one to easily spot a drain that is properly protected as well.

**20. When should the REUSABLE DrainGuard be used?** In most instances the Ultra-DrainGuard, Reusable Model Part # 9341 will be used in cases where there are *large amounts* of solids or floatable objects that must be captured. Construction sites are a good fit to allow the Reusable DrainGuard to filter up to 500 lbs of dirt before it is removed, dumped and replaced. Cities may find the Reusable DrainGuard an effective way to capture large quantities of leaves during leaf season as well.

**21. How do you install a REUSABLE DrainGuard?** Grates can be easily removed by utilizing the Ultra-GrateLifter® part # 9234, a new product that allows a single person to lift the grate with this professional quality lever devise. The Ultra-GrateLifter® can lift up to a 400 pound grate. When the grate has been removed the Reusable DrainGuard should be placed over the open hole and can be held in place heavy objects or rebar on the skirt/loops to hold it in place while the grate is moved back into position. The large flat support base of the Ultra-GrateLifter® remains stationary when the grate is removed so that the grate goes right back into place when it is returned to the catch basin. When the Reusable DrainGuard is positioned back in place, the excess material should NOT be trimmed, as this filter material forms **loops** that will receive a piece of **rebar** to lift the Reusable DrainGuard out of the catch basin when it is full (It will hold up to 500 lbs of dirt and may require heavy machinery to lift).

**22. When should a Dewatering Bag be used?** Use an Ultra-DewateringBad® part # 9724 O/S when sediment needs to be removed from a stream of water before it is discharged into the receiving body of water. Larger flow rates require larger sized bags. When contaminants such as oils are present, the standard dewatering bag is recommended. The bag acts as a filter as water flows through the needle punched geotextile material. The sediment present in the liquid will be trapped as the water flows through the material.

**23. When should a REUSABLE Dewatering Bag be used?** Use an Ultra-DewateringBad, Reusable Model® part # 9730 when the sediment being filtered from a stream of water is relatively free of contaminants like oils, the sediment can be removed and the bag used repeatedly. A typical use of this bag would be in dewatering situations when broken water lines are repaired. A sump pump removes the water from the repair hole and the dirt which is generally free of contaminants can be dumped and the dewatering bag used over and over.

**24. When should a Pipe Sock be used?** When sediment from a stream of water contains oil, the sediment and hydrocarbons can be removed employing the Ultra-PipeSock® part # 9705-O/S . The PipeSocks are made with an excellent filtration fabric know as X-Tex. This recycled filter fabric is extremely efficient at removing hydrocarbons and sediment quickly from a moving stream of water. The Ultra-PipeSock® is best suited for applications



with limited working space and low sediment concentrations as they have a long and narrow design.

- 25. Why is X-Tex so special?** X-Tex is very efficient in removing hydrocarbons from water very rapidly. X-Tex excels as a spill removal media capable of sorbing liquid hydrocarbons, including petroleum, animal and vegetable oils onto its vast fiber mass surfaces and into process-created interstitial spaces. When used as a filter medium, water passes freely, while adsorption of target hydrocarbons begins on contact. X-Tex is extremely efficient due to the enormous lipophilic surface area of the altered fibers. X-Tex works well as a fibrous supporting matrix for other water conditioning materials such as selective zeolites, activated carbon, zero-valent iron filings, etc. X-Tex can be 'conditioned' to remove specific chemical compounds. X-Tex is cost effective in comparison to many conventional filtering media, adsorbing/absorbing an average of 20 times its own weight of liquid hydrocarbons. Approximately 85-90 % of sorbed oils can be reclaimed from X-Tex and the media reused. In bench-scale testing, X-Tex has shown promising results in filtering out emulsified oils and hydrocarbons out of a water stream. This characteristic creates opportunities for the use of X-Tex in oil/water separation applications and other hydrocarbon filter projects. X-Tex forms into cohesive mats or "wads" which can easily conform to various applications or filter devices. X-Tex is environmentally benign and user-friendly. It does not leach harmful substances into the environment and when incinerated produces minimal residue or ash.
- 26. How does the Ultra-HydroKleen® work?** The Ultra-HydroKleen® part # 9351 is also a highly effective "Catch Basin Insert" designed to filter high concentrations of sediment, oil and debris from stormwater runoff. The device is custom made for each catch basin and is a simple to install and cost effective. The Ultra-HydroKleen® is installed in a catch basin and is suspended in place by a stainless steel support frame. Stormwater runoff enters the Ultra-HydroKleen® and is directed toward the pre-settling sediment chamber by a diverter plate. The sediment chamber captures sediment as the stormwater flows through the transition outlets and into the filter media chamber. Two stages of filters media remove numerous pollutants as the stormwater flows through exits the polyethylene chamber through ports on the bottom. Bypass ports are located around the top portion of the polyethylene structure to address high flow rain events. Two types of media come standard with each unit, a cellulosed based media and activated carbon based media. The Ultra-HydroKleen® is a great solution for "hot spot" drains in industrial facilities where high concentrations of pollutants may be present.
- 27. How does the Ultra-TrenchFilter® work?** The Ultra-TrenchFilter® part # 9700 is effective at capturing oil and trapping sediment in trench drains and pipes. The filter is made with a 10 ft. x 2ft. section of X-Tex filter strips. A nylon cord is sewn along the entire length of the fabric for strength. Loops are provided on each end to allow the TrenchFilters to be tied together for long runs of trenches/pipes. The filters create mixing and turbulence as stormwater travels over and through the X-Tex fabric. Hydrocarbons will be captured as well as some sediment as water flows through and over the material. A 10 ft. cord is provided to tie off the trench filter and secure it in place.
- 28. Why are Ultra-HardTops considered BMPs?** The stormwater regulations provide a permit exclusion for facilities whose activities do not have exposure to stormwater runoff. Stormwater regulations require that "Good Housekeeping" measures be observed including preventing of spills from reaching the "Waters of the United States". Using outdoor

storage containment systems like the Ultra-HardTops part # 9612 will enable the client to meet these requirements. Ultra-HardTops are thus considered a “Structural BMP” in that they are serving as a means of secondary containment and weather protection for drums and IBCs.

**29. What is a StormWattle and when should it be used?** A StormWattle part # 9740 or “fiber roll” is a log type berm/barrier made from tightly compacted wheat straw. StormWattles are used in the same fashion as silt fence, acting as a barrier to erosion and as a means to capture sediment. The use of wattles or fiber rolls in erosion control is growing dramatically in popularity in California where they can be seen up and down the highways. StormWattles are made with poly netting, 9 and 12 inches in diameter and 10 ft or 25 ft in length.

**30. How do StormWattles compare to SiltFence and Gravel Bags?** StormWattles part # 9740 (sometimes called Fiber Rolls) are biodegradable, lighter & easier to handle or repair than siltfence or gravel bags. They are also less expensive than silt fence. They can be run over by contractors' equipment and still maintain their usefulness. They can blend into the landscape and from the aesthetic stand point; they are preferred over silt fence and gravel bags. Gravel bags can do the same work as the fiber rolls but they tend to break open if run over by traffic and discharge sand or gravel into the inlets.

**31. What are the best products (BMPs) to prevent oil & sediment from entering a standard catch basin?**

- Ultra-DrainGuard Oil & Sediment Model® Part # 9217
- Ultra-DrainGuard Oil & Sediment PLUS Model® Part # 9219 (with X-Tex Filter Strips for additional oil absorption)
- Ultra-DrainGuard Reusable Model® Part # 9341
- Ultra-HydroKleen® (used for “hot spot” drains in industrial settings) Part # 9351
- Ultra-GrateGuard®

**32. What are the best products (BMPs) to prevent oil & sediment from entering a curb inlet and grate combination?**

- Ultra-DrainGuard Curb-Insert Style Oil & Sediment Model® Part # 9230
- Ultra-DrainGuard Curb-Insert Style Oil & Sediment PLUS Model® Part # 9239 (with X-Tex Filter Strips for additional oil absorption)
- Ultra-DrainGuard Reusable Model Curb Style® Part # 9332
- Ultra-CurbGuard® Part # 9265-SED

**33. What are the best products (BMPs) to prevent oil & sediment from entering a curb inlet?**

- Ultra-CurbGuard®... Made with a 4 inch diameter barrier/berm pipe with high flow rates, constructed from a woven monofilament fabric.
- Ultra-CurbGuard Insert Style®... A multi-layered section of X-Tex fabric forms a barrier to sediment and floatable and oil as stormwater flows through the material.
- Ultra-GutterGuard®... Made with a large diameter roll with lower flow rates, made with a geotextile fabric.

**34. What are the best products (BMPs) to capture oil and sediment in trenches and pipes?**

- Ultra-TrenchFilter® (2 ft. x 10 ft. sections of X-Tex filter strips)

**35. What are the best products (BMPs) to remove oil floating on the surface of a catch basin?**

- Ultra-PassiveSkimmer® Part # 9260

**36. What are some other products (BMPs) that help to meet the “Good Housekeeping” requirements of the stormwater regulations?**

- Ultra-DrainSeal® Part # 2130 (used to cover storm drain grates to keep spills out of the catch basin)
- Ultra-SpillBerm® Part # 2100 (used to block spills from entering storm drains and catch basins)
- Ultra-SillDecks® (used to contain spills and preventing them from entering storm drains)
- Ultra-Pop-Up-Pools® Part # 8150 (used to capture spills from leaking fuel tanks, etc.)
- Ultra-ContainmentBerms® Part # 8310 (used to prevent spills from escaping from vehicle unloading and drum storage locations)

**37. What are the best products (BMPs) to protect railroad fueling/unloading operations?**

Ultra-TrackPans® Part # 9596 (pans serve to capture spills originating from fueling and loading/unloading of hazardous materials from rail cars. Ultra-TrackPans® are constructed in a modular design. The Center and Side Pans are 53.5" long; containment areas can be easily assembled to any length desired. Made with Polyethylene, TrackPans can withstand harsh chemicals and are designed to function in temperatures ranging from -40°F to +140°F.

## GLOSSARY

**Best Available Technology Economically Achievable (BAT)**

Technology-based standard established by the Clean Water Act (CWA) as the most appropriate means available on a national basis for controlling the direct discharge of toxic and nonconventional pollutants to navigable waters. BAT effluent limitations guidelines, in general, represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

**Best Management Practices (BMPs)**

Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the United States. BMPs also include treatment requirements, operating procedures, and practice to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

**Biochemical Oxygen Demand (BOD)**

A measurement of the amount of oxygen utilized by the decomposition of organic material,

over a specified time period (usually 5 days) in a wastewater sample; it is used as a measurement of the readily decomposable organic content of a wastewater.

**Bypass**

the intentional diversion of waste streams from any portion of a treatment (or pretreatment) facility.

**Chemical Oxygen Demand (COD)**

A measure of the oxygen-consuming capacity of inorganic and organic matter present in wastewater. COD is expressed as the amount of oxygen consumed in mg/l. Results do not necessarily correlate to the biochemical oxygen demand (BOD) because the chemical oxidant may react with substances that bacteria do not stabilize.

**Code of Federal Regulations (CFR)**

A codification of the final rules published daily in the Federal Register. Title 40 of the CFR contains the environmental regulations.

**Combined Sewer System (CSS)**

A wastewater collection system which conveys sanitary wastewaters (domestic, commercial and industrial wastewaters) and storm water through a single pipe to a publicly owned treatment works for treatment prior to discharge to surface waters.

**Municipal Separate Storm Sewer System (MS4)** A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

1. Owned and operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the Clean Water Act (CWA) that discharges to waters of the United States;
2. Designed or used for collecting or conveying storm water;
3. Which is not a combined sewer; and

Which is not part of a publicly owned treatment works (POTW)...[40 CFR 122.26(b)(8)].

**National Pollutant Discharge Elimination System (NPDES)**

The national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of CWA.

**Point Source**

Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff.



**Pollutant**

Dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water [40 CFR 122.2].

**Pretreatment**

The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a publicly owned treatment works [40 CFR 403.3(q)].

**Priority Pollutants**

Those pollutants considered to be of principal importance for control under the CWA based on the NRDC consent decree settlement [( NRDC et al. v. Train, 8 E.R.C. 2120 (D.D.C. 1976), modified 12 E.R.C. 1833 (D.D.C. 1979)]; a list of these pollutants is provided as Appendix A to 40 CFR Part 423.

**Publicly Owned Treatment Works (POTW)**

A treatment works, as defined by Section 212 of the CWA, that is owned by the state or municipality. This definition includes any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes, and other conveyances only if they convey wastewater to a POTW treatment plant [40 CFR 403.3]. Privately-owned treatment works, Federally-owned treatment works, and other treatment plants not owned by municipalities are not considered POTWs.

**Sanitary Sewer**

A pipe or conduit (sewer) intended to carry wastewater or water-borne wastes from homes, businesses, and industries to the POTW.

**Sanitary Sewer Overflows (SSO)**

Untreated or partially treated sewage overflows from a sanitary sewer collection system.

**Small Construction Activity**

Clearing, grading, and excavating resulting in a land disturbance that will disturb equal to or more than one acre and fewer than five acres of total land area but is part of a larger common plan of development or sale that will ultimately disturb equal to or fewer than five acres. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site [40 CFR 122.26(b)(15)].

**Spill Prevention Control and Countermeasure Plan (SPCC)**

A plan prepared by a facility to minimize the likelihood of a spill and to expedite control and cleanup activities should a spill occur.

**Storm Water** Storm water runoff, snow melt runoff, and surface runoff and drainage [40 CFR 122.26(b)(13)].

**Storm Water Pollution Prevention Plan (SWPPP)**

A storm water pollution prevention plan (SWPPP) is a written document that describes the construction operator's activities to comply with the requirements in the construction general permit (CGP). The SWPPP is intended to facilitate a process whereby the operator evaluates potential pollutant sources at the site and selects and implements appropriate measures designed to prevent or control the discharge of pollutants in storm water runoff.

**Total Maximum Daily Load (TMDL)**

The sum of the individual wasteload allocations (WLAs) for point sources and load allocations (LAs) for nonpoint sources and natural background.

**Total Suspended Solids (TSS)**

A measure of the filterable solids present in a sample, as determined by the method specified in 40 CFR Part 136.

**Waters of the United States**

All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to the ebb and flow of the tide. Waters of the United States include all interstate waters and intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds. [See 40 CFR 122.2 for the complete definition.]

**Wetlands**

Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

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